



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,679	09/11/2003	Nobuyoshi Horie	1163-0470P	4487
2292 7590 07/10/2009 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747				
EXAMINER				
GRANT IL JEROME				
ART UNIT		PAPER NUMBER		
2625				
NOTIFICATION DATE		DELIVERY MODE		
07/10/2009		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com



### Office Action Summary

**Application No.**

10/659,679

**Applicant(s)**

HORIE ET AL.

**Examiner**

Jerome Grant II

**Art Unit**

2625

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-24, 31, 32 and 35 is/are allowed.
- 6) ☒ Claim(s) 25-30, 33 and 34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/5508)  
Paper No(s)/Mail Date \_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_



**Detailed Action**

**1.**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 25, 26, 29, 30, 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Campana (5,446,759).

Claims 25, 26, 29, 30, 33 and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Campana (5,446,759).

With respect to claim 25, Campana teaches a fax signal transmitting device (620) for transmitting fax signals from a fax terminal 618 or 204 ( of figs. 34 and 35 ) the transmitting device comprising:

A frame assembling part (digital signal processor or U1) for generating a frame data (shown by figs. 2, 19 and 20) by combining a fax signal output (data unit frame group) from the fax terminal and a redundancy fax signal output (bch error code, according to figure 30, in addition the redundancy transmission of data in adjacent frames of data transmitted by a terminal such as the fax terminal, see col. 4, lines 37-43 and 48-53; outputting the frame data onto a transmission line (wireless channel 616, see fig 34).



In the middle of paragraph 88 of the Campana references, it states: "The encoding format, as described above and error correction routines, such as the 32/14 BCH error correction routine in a one-way wireless application or other error correction routine in a two-way wireless application, **that needs to be added to the dual streams** (emphasis added) of information reside in a resident stored program memory U50.

Therefore the error correction is added to the dual streams. The claimed invention refers to a facsimile signal and a redundancy facsimile signal.

The last two sentences in paragraph 88 states that the message is temporarily stored in the 2K RAM buffer U46 and as the digital signal processor forward the information to either the digital shift register U13 to produce the digital format of figs. 7b and 13 for transmission to a digital or analog transmission.

Both signals (the redundancy signal), which corresponds with the error codes, and the facsimile signal from a fax signal transmitting device 620 or from terminals 618/204 are added **before** being transmitted in either analog or digital formats by the digital signal processor U47.

While Campana does not specifically use the term redundancy facsimile signal, it would have been obvious to one of ordinary skill in the art that the redundancy signal referred to is an error correction code. While cyclical redundancy check error correction is not used by Campana, other error correction codes would have been recognized by



one of ordinary skill in the art to transmit error codes with facsimile data in order to minimize the transmission of erroneous signals.

With respect to claim 26, Campana teaches signal storage part 730, 734, 752 and 754, for storing the fax signal from a fax terminal (see figures 34 and 35) which is the typical transceiver device for fax device 620).

With respect to claim 29, Campana it is inherent when the number of errors exceed a predetermined threshold in the BCH, the data will be retransmitted and the process repeated until the number or detected transmission errors is within a predetermined threshold.

With respect to claim 30, Campana teaches a frame packet wherein each packet contains 3 1/2 pages. See col. 4, lines 42-50. Moreover, while Campana uses a synchronous transmission scheme, The transmission is not time clocked until the paging events can be determined. At col. 8, lines 31-36, it states the paging events are random, hence the transfer of the page data must in certain respects be translated asynchronously.



With respect to claim 33, Campana teaches a method of transmitting fax signals (see figures 22) output from a fax terminal 618 or 704 ( see figs. 34 and 35) comprising the steps of:

Generating frame data via resident processor (U1) by combining a fax signal output from the fax terminal and a redundancy fax signal (/bch error code, see figures 1 and 5a) output from the fax terminal before the fax signal (1st and 2<sup>nd</sup> data unit of the next frame group), in addition the redundancy transmission of data in adjacent frames of data transmitted by a terminal such as the fax terminal, see col. 4, lines 37-43 and 48-53; and transmitting the frame data onto a transmission line (wireless channel 616).

In the middle of paragraph 88 of the Campana references, it states: "The encoding format, as described above and error correction routines, such as the 32/14 BCH error correction routine in a one-way wireless application or other error correction routine in a two-way wireless application, **that needs to be added to the dual streams** (emphasis added) of information reside in a resident stored program memory U50.

Therefore the error correction is added to the dual streams. The claimed invention refers to a facsimile signal and a redundancy facsimile signal.

The last two sentences in paragraph 88 states that the message is temporarily stored in the 2K RAM buffer U46 and as the digital signal processor forward the information to either the digital shift register U13 to produce the digital format of figs. 7b and 13 for transmission to a digital or analog transmission.



Both signals (the redundancy signal), which corresponds with the error codes, and the facsimile signal from a fax signal transmitting device 620 or from terminals 618/204 are added **before** being transmitted in either analog or digital formats by the digital signal processor U47.

While Campana does not specifically use the term redundancy facsimile signal, it would have been obvious to one of ordinary skill in the art that the redundancy signal referred to is an error correction code. While cyclical redundancy check error correction is not used by Campana, other error correction codes would have been recognized by one of ordinary skill in the art to transmit error codes with facsimile data in order to minimize the transmission of erroneous signals.

With respect to claim 34, Campana teaches wherein the redundancy fax signal crc/bch is previous to the fax signal output by the terminal. Note that the is BCH signal appears before the first and second data unit of the next frame group. See figures 21 and 22.



2.

Claims Allowed

Claims 31, 32 and 35 are allowed for the reason the prior art does not teach the selector as claimed.

3.

Claims Objected

Claims 27 and 28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.



4.

#### Examiner's Remarks

Applicant has presented two salient arguments in regard to the office action mailed 5-15-08.

The first argument is found at the bottom of the first page of the Remarks which states:

"Campana fails to teach or suggest ..... generating a frame data by combining a facsimile signal output from said facsimile terminal and a redundancy facsimile signal output from said facsimile terminal before said facsimile signal."

Applicant emphasizes the term, "before".

The examiner relied upon the use of digital signal processor U3 as the means for establishing the claimed invention. Signal processor U3, while having two signals at its input, suggest that it is a decoder rather than a combiner. In light of applicant's argument, the U3 processor is more of a decoder than a combiner although two signals are being input to the processor.

The examiner has modified the rejection, to include the processor U1, instead of U3 as the means for establishing the claimed invention. In the middle of paragraph 88 of the



Campana references, it states: "The encoding format, as described above and error correction routines, such as the 32/14 BCH error correction routine in a one-way wireless application or other error correction routine in a two-way wireless application, **that needs to be added to the dual streams** (emphasis added) of information reside in a resident stored program memory U50."

Therefore the error correction is added to the dual streams. The claimed invention refers to a facsimile signal and a redundancy facsimile signal.

The last two sentences in the paragraphs state that the message is temporarily stored in the 2K RAM buffer U46 and as the digital signal processor forward the information to either the digital shift register U13 to produce the digital format of figs. 7b and 13 for transmission to a digital or analog transmission.

Both signals (the redundancy signal), which corresponds with the error codes, and the facsimile signal from a fax signal transmitting device 620 or from terminals 618/204 are added **before** being transmitted in either analog or digital formats by the digital signal processor U47.

With regard to the second argument, applicant contends that an error code cannot be the redundancy facsimile signal.



In transmitting data, there is often noise that is transmitted and has the tendency to corrupt the original true signal. Error correction codes such as BCH or CRC are standard correction codes. CRC, for example, refers to cyclical redundancy check.

Applicant recites in the claim, "redundancy facsimile signal". Hence, the term redundancy can be interpreted broadly as a signal for error correction.

While CRC is not used by Campana, the BCH which is a type of error code is referred to in paragraph 88.

The claim does not use language to exclude the use of CRC or BCH codes as a redundancy facsimile signal.

5.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerome Grant II whose telephone number is 571-272-7463. The examiner can normally be reached on Mon.-Fri. from 9:00 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Coles, can be reached on 571-272-7402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Jerome Grant II/  
Primary Examiner, Art Unit 2625



